Postoperative Outcome of Enchondroma of the Hand with Pathologic Fracture

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COI Disclosure
In connection with this presentation, there is no COI to be disclosed with any companies.

Background
Enchondroma is the most common bone tumor arising in the hand. The tumors are often recognized with the incidence of pathological fractures. Once these fractures are healed, the patients are usually treated by curettage and bone graft. However, we sometimes encounter cases with limitation of finger range of motion (ROM) postoperatively.

Aim
To clarify the risk factor for ROM limitation in enchondroma patients with pathologic fractures.

Materials & Methods
2008 - 2017 Total cases for enchondroma of hands : 59 cases
- Pathological fractures
- Surgical treatment (curettage + artificial bone graft)

Gender : Male 8 cases Female 16 cases
Average age : 42.5 y.o. (10 - 78)
Average follow up : 20 mo (5 - 76)

Evaluation
☆ Post operative ROM:
- Strickland’s evaluation (TAM (PIP+DIP) > 75%)
  - Location of lesion
  - Age
  - Gender
  - Period from fracture to surgical treatment
  - Intra-articular fracture (+ or -)
  - Displacement of fracture (≧2mm or less)

Results
☆ Strickland’s evaluation

Excellent 18 cases 75% (%TAM≧85%)
Good 3 cases 12.5% (85% > %TAM≧70%)
Fair 3 cases 12.5% (70% > %TAM≧50%)
Poor 0 cases 0% (50% > %TAM)

(Full ROM 15 cases (63%))

Discussion
- Comparison between 9 were treated with immediate curettage and bone graft vs 32 treated after fracture union.
  - No difference in time to achieving full motion between the groups. ([Adam AS et.al. 2012])

Risk Factor of ROM Limitation
- Middle phalanx lesion: Middle phalanx lesion involves and may affect both PIP and DIP joints.
- Over 43 y.o.: Effect of aging, but may or reflect the presence of underlying OA change etc.
- Displacement of fracture ≧2mm: Prolonged immobilization for the fracture treatment may be the cause of ROM limitation.

Conclusion
- We investigated the postoperative digital function of enchondroma with pathological fracture.
- Risk Factor of ROM Limitation were Middle phalanx lesions, Age (≧43 y.o.) and Displacement of fracture (≧2mm).

References: